MEDICAL AND PHILOSOPHICAL REGISTER.

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FOREIGN AND DOMESTIC.

Observations on American Medical Practice.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

I HAVE been a constant reader of the London Medical and Physical Journal from the commencement of its publication, and an occasional contributor to its contents; proofs that I have hitherto approved of the mode of conducting it.

It is with no small degree of pain, that I now hear frequent complaints among my medical acquaintance, of a want of selection of cases of cautious practice, and that admittance is too frequently afforded to dangerous trans-atlantic communications. Not that I would interdict, gentlemen, the reception of *foreign* intelligence from your Journal, or wish to confine you solely to indigenous literature; but no thinking man, or conscientious

practitioner of physic, can readily bring himself to believe that the *Herculean* practice of our American brethren which has of late occupied the pages of your Journal, can be imitated with impunity in *our island.* The recital of cases lately transmitted to you can answer no good purpose; on the contrary, it is fraught with the greatest danger*. Your Journal is very widely circulated amongst British practitioners, and perused more particularly by the *junior part* of the profession, who anxiously wait the revolving period of its publication, in the hopes of adding something to their stock of knowledge, that might lead them to success in their future practice. What then must be their disappointment, gentlemen, on perusing its contents, where the most prominent feature is the *Brunonian theory* reduced to practice with a vengeance? Numerous instances might be adduced from your latter Journals, some of which (if I recollect right) have already been animadverted upon by some more rational practitioner at home. But too much cannot be said here, in condemnation of American practice.

If they chuse to salivate in phthisis pulmonalis, and at the same time draw blood to the amount of *thirty ounces* daily, for several days together, and deplete in every possible manner, let them enjoy the felicity of seeing their patients escape with life, after putting in force such unwarrantable practice; but why allow them to infuse these *murderous* principles among us?

* The Editors are of opinion, that it answers a good purpose to show what can be done in other climates, as well as the united kingdom; and that their readers possess sufficient discrimination to guard them against the contagion of *rash* practice.

I cannot deny that such is their practice, but I can deny that it would be alike successful in our island. The American mode of living may be different from ours, their stamina more robust; but from such depleting doctors may my countrymen be ever defended!

The patient's account of himself, from whom I have quoted the above *notable* method of practice*, is that in the spring of 1803, he was attacked by phthisis pulmonalis, and, as advised by an eminent physician, immediately began to rub in strong *mercurial ointment*, and to take calomel in as *large doses* as his constitution would bear.

Now, considering this was an *American* constitution, these doses no doubt would astonish a *British* practitioner, but the relator cruelly forbears to inform us whether each dose contained ten, twenty, or thirty grains of calomel, but I think we may venture to place it not less than the first: he was "*previously* reduced by *night* sweats and a plentiful expectoration;" to add to his misery, he was attacked with peripneumony! In forty-eight hours the friction and calomel produced ptyalism, for he very justly remarks, that, under the circumstances above mentioned, there was no *time to be lost!* so that "*thirty ounces* of blood were taken away daily, for several days together," to give the "mercury liberty to operate," a very judicious reason for venesection. So soon as his mouth became affected, "the cough ceased, expectoration abated, and *every* pulmonary symptom began to disappear." In September of the same year, however, he adds, "*Now* I cough none, of *any consequence*, and do not expectorate more than two or three times a

* Vide Medical and Physical Journal for March, 1808, in a Letter to Dr. Rush, page 219.

day." Yet this is a case of phthisis pulmonalis *cured* by mercury: and *venesection* should likewise have been added. Yet he is "at a loss to know, whether he should *continue the ptyalism*, or have *recourse to tonics*," although in the very next line he adds, "my *debility* is still *very great*, not being yet able to walk alone." Surprising!

I have only, gentlemen, to apologize to *you* for troubling you with these observations, assuring you they are meant as a friendly hint; the above case *can* require no comment: to state the facts as they are related is sufficient for the discriminating eye of the generality of your readers; I shall therefore only add, that by turning over the pages of your former Journals, *other cases* can be pointed out when the *mode of* treatment was still more preposterous, and unjustifiable upon any solid scientific than that of the preceding, and where the patients were not quite so fortunate, but who were doomed to fall victims to obstinate perseverance in that grand catholicon of transatlantic art, copious depletion. I am, &c.

A PRACTITIONER IN WILTSHIRE.

April 5, 1808. *Med. & Phys. Journ. No.* 111.

Account of a Case of Ossified Uterus. *By* Arthur Mackie, *M. D. of Lewisham, Great Britain, April* 3*d*, 1800.

On the 28th of January last I was called on to open the body of Mrs. Ruff, who died the day before, in the 72d year of her age.

She had suffered much from disease, and desired that she might be opened after her death. What I could learn of her

history was as follows: She was born of healthy parents, and was herself strong and healthy till her marriage in her 32d year. She soon after was supposed to become pregnant; but symptoms of dropsy also appearing, she was attended by Drs. Fothergill and Watson, and an accoucheur, who all agreed that it was a case of pregnancy (though her menses continued regularly), accompanied by anasarca; and they prescribed some diuretic medicines. These produced a copious discharge of urine: the dropsical appearances subsided, but the size of the abdomen continued to increase, with more than usual uneasiness, till the supposed time of her delivery.

This anxious period at length passed over, and, to the great alarm of the patient and her family, no labour or delivery took place. From this time she had bad and irregular health; her bulk continued undiminished; she had obstinate constipations; she was frequently attacked with hot, burning, excruciating pains in her belly, that could only be relieved by opium; she became subject to violent gouty paroxysms, which confined her to her bed two or three months in the year, and left her extremities much distorted; and for a long while past, she had been a constant sufferer from the size and increased weight of the abdomen; and, particularly, on turning in bed, when the bulk fell to the lower side, in a lump (as she expressed it), it never failed to give her the most distressing pain and uneasiness. A paralytic stroke, which deprived her of the use of speech, and of one side, preceded her death a few days.

On uncovering the abdomen, it appeared unusually large, hard, and incompressible; the bulk rather exceeding that of a pregnant woman at her full time, and inclining to the left side. In cutting along the linea alba, after dividing the skin, I found the muscles so much ossified, from about three inches above

the umbilicus, that I could not separate them without a very strong knife. The ossification extended as much below the navel, and about three or four inches on each side, having some resemblance to the top of a child's skull. The inside had a smooth, shining polish, apparently from its friction on the uterus, between which and these ossified muscles nothing intervened, the peritonæum being entirely obliterated. On laying aside the separated integuments, the uterus appeared in full view, filling almost the whole cavity of the abdomen, and even pressing against the diaphragm. Its appearance somewhat resembled a very large pellucid bladder distended with hog's lard, and pressed a little flat at the fundus. It was some time before I observed the intestines, which were pushed into a space not exceeding a cube of two inches, in the lower part of the left side of the pelvis, and seemed crowded, shrunk, and empty. The omentum was obliterated. Near them lay above twenty hydatids of different sizes, of a beautiful polished white colour, and several of them as large as pullet's eggs, but without any fluid.

On attempting to cut into the uterus, the knife made no impression, till great force was used, the ossification was so complete: the divided sides appeared of a chalky, brittle, dead white, no vestige of nerves or blood-vessels remaining. The fundus was about a quarter of an inch thick, and perfect bone; the body of the uterus thicker, and not unlike the thickest parts of the occiput. The ossification ended at the cervix, which was of a hardish sebaceous texture, and four or five inches thick. On cutting through this part, about a quart of strong fœtid pus was discharged; and, on making a complete division of the uterus (which was large enough to contain the body of a full-grown fœtus), I found a large detached unformed spungy mass, composed of soft and hard parts; the former resem-

bling moist decayed wood, and easily compressible into a small bulk; the latter somewhat like the ends of the long bones, but no specific part ascertainable; though the whole conveyed to my mind the possibility of its once having been a fœtus.

The uterus with this substance, when taken out of the body, weighed eighteen pounds three quarters, avoirdupois.

The ovaria, Fallopian tubes, and ligamenta rotunda, differed little from their natural size and colour; the liver was small, hard, and of a dark red, and pushed backwards; the gall-bladder appeared as if squeezed by the uterus, part of which was stained with bile. The kidneys were larger than usual, and covered with watery blisters; the vesica urinaria small and empty; the stomach, spleen, and pancreas appeared shrunk, and with the diaphragm pushed upwards.

I was not allowed time to make a more minute examination, or any further remarks; I thought these sufficiently curious to merit being recorded.

Med. & Phys. Journ. vol. III, p. 423.

Observations on the extraction of Opium from the Poppy. In a letter to the Editor from H. Wilkins, *M. D. of Baltimore.*

Last summer I made an experiment on a few poppies that grew in my garden, the result of which I will communicate to you. I have long been convinced that the only desideratum, in opium making, was a method to extract the whole of the gum-resinous juices of the plant. I succeeded so far in this, that I think it now an object worth the attention of gardeners to cultivate the poppy for use as well as beauty. As soon as

the juices had ripened to a rich milky appearance (choosing a clear day), I cut off the head or fructification, and received the overflowing juices on a piece of glass, after which the exudation from the same spot, instead of running down the stem, dried away in the course of two hours, into a little cake of opium. Returning, I cut off with a sharp instrument (a pair of scissars is the best), the above-mentioned little cake, taking with it the least possible quantity of the stem, not more than a line. Instantly after this operation I took off two inches of the stem, and I found, to my great satisfaction, that I had opened the lethean stream afresh, so that I had but to repeat my operations in the same succession and manner as above, till the whole plant was cut down.

I had then two parcels of opium, one on the glass quite pure, and the other consisting of pure opium and clippings of the stem. From these it may be freed by solution in a diluted spirit, and pressure through a hair-cloth.

I am satisfied that any species of poppy will answer. It is a great error, as my experiment will prove, to suppose that such species only as have large capsules will answer; on the contrary, it appears that the more branchy the better. Hereafter we may examine into the relative strength of pure opium prepared from the different species, for we have been very much in the dark about the eastern mode of opium making.

H. Wilkins.

March 24, 1809.

Dr. Sangrado.

The following Biography of a man who has been very undeservedly held up to public derision by Le Sage, in the well-known character of Dr. Sangrado, cannot but be acceptable to those readers, who may not have had an opportunity of perusing it in Hutchinson's Biographia Medica.

Philip Hecquet, a French physician of singular merit and skill, but a strong defender of the use of warm water and of bleeding, for which reason he was ridiculed by Le Sage in his Gil Blas, under the name of Dr. Sangrado, was born at Abbeville, in 1661, and practised first in that city, then at Port Royal, and lastly at Paris. He was not properly *san grado*, for he took the degree of doctor in 1697, and in 1698 had more business than he could attend.

Though attached to the most simple mode of life, he was obliged to keep his carriage, in which he studied with as much attention as in his closet. In 1712, he was appointed dean of the faculty of medicine, and superintended the publication of a sort of dispensary, called " The New Code of Pharmacy," which was published some time afterward. Hecquet was no less zealous in religious matters, than studious in his own profession, and is said never to have prescribed in doubtful cases, without having a previous recourse to prayer. He lived in the most abstemious manner, and in 1727 retired to a convent of Carmelites in Paris, where he continued accessible only to the poor, to whom he was a friend, a comforter, and a father. He died in 1737, at the age of 76. This able physician published several works, none of them devoid of merit. They are the following:

1. " On the Indecency of Men-midwives, and the obligation of women to nurse their own children," 12mo, 1728.

2. " A Treatise on the Dispensations allowed in Lent," two volumes, 12mo, 1705, and 1715.

3. " On Digestion and the Disorders of the Stomach," two volumes, 12mo.

4. " A Treatise on the Plague," 12mo.

5. " Novus Medicinæ Conspectus," two vols. 12mo.

6. " Theological Medicine," two vols. 12mo.

7. " Natural Medicine,"—ditto.

8. " De Purganda Medicina a Curarum Sedibus," 12mo.

9. " Observations on Bleeding in the Foot," 12mo.

10. " The Virtues of common Water," two vols. 12mo.

11. " The Abuse of Purgatives," 12mo.

12. " The Roguery of Medicine," in three parts, 12mo.

13. " The Medicine, Surgery, and Pharmacy of the Poor," three vols. 12mo.

14. " The Natural History of Convulsions."

The life of this illustrious physician was written at large by M. le Fevre de St. Marc, and is not less edifying to christians, than instructive to medical students.

Quacks! Quacks! Quacks!

It is with uncommon satisfaction the Editor opposes to the numerous advertisements of the European continent, the following specimens of domestic growth, which we trust will be found by no means behind the merits of our trans-atlantic brethren. The " stubborn integrity, and perfect scientific knowledge," which so eminently distinguish the learned author

of one of the advertisements, cannot fail of satisfying the judgment of the truth of his remark, that the " notice is given in order to snatch those that are or may be afflicted with that disease* from the hands of quacks or unskilful pretenders."

In hopes of aiding this truly philanthropic spirit, I would propose for perusal to my learned and unlearned readers the 14th and 68th letters of the Citizen of the World, which are replete with wisdom and sound observation.

AMERICAN DISPENSARY.

Doctor Dyott has the honour most respectfully to acquaint the public, that he has established a Medical Dispensary, at his house No. 116, North Second-street, the second door above Race-street, Philadelphia, where they can be supplied with drugs and medicines, warranted genuine, and prepared agreeably to the Pharmacopœia of the royal college of physicians, London.

Persons requiring medical aid, will find in Dr. Dyott that *skill* and *stubborn integrity* combined, which *distinguishes his character;* his *perfect scientific knowledge*, united with many years extensive practice in the city of London, enables him to do justice to the afflicted in a manner *very uncommon.*

Mercury, though of itself a noble medicine, the indiscriminate and unqualified use thereof among mankind, has been productive of infinite mischief: our present limits forbid attempting an enumeration of evils, arising from the abuse of mercury; suffice to say, they are numerous, grievous, and destructive to the finest functions of nature. Dr. Dyott, having long witnessed the ravages committed on the human structure, as consequences resulting from a certain disease, through its being neglected or improperly treated, it has claimed and obtained his particular attention. It is a melancholy truth, that the indulgence *in this solitary vice* brings on those deficiencies and debilities which frequently prevent and imbitter the matrimonial state; and imposes by anticipation upon its unhappy victims all the *impurities of old age:* to such persons it must be a consol-

* *Quere:* What disease is here alluded to? It cannot be the one denominated " a certain disease," as I never heard it spoken of before as a " solitary vice." EDITOR.

ing reflection to know that they may now, by a new and infallible mode of treatment, be restored to health, strength, and manly vigour. This public notice is given in order to snatch those that are or may be afflicted with that disease from the hands of quacks or unskilful pretenders; and to direct them where they will receive the most tender treatment, and have a cure performed in a few days, at a very small expence.

Persons having contracted a venereal complaint, are admonished not to tamper with their constitutions, but do *justice to their conscience, and meet every advantage* by making early application to Dr. Dyott, who may be consulted, by patients of either sex, with the greatest delicacy, secrecy, and honour. The apartments are detached for separate consultation, and, in order to afford every convenience and facility to patients, attendance will be given till 10 o'clock in the evening.

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From the American Daily Advertiser.

WONDERFUL CURE.

Mr. Poulson,

I send for insertion the following extraordinary cure of a cancer. This disease, which has hitherto been accounted incurable, and which, like the small-pox a century since, when it seized on the patient, hurried him into hopeless despair, now sinks before the hands of the physician, and its clouded mists are dispersed by the light from the medical firmament.

Mrs. Mary Schwytzer, who resides in Fourth, near Vine-street, aged about 40 years, was attacked in the face, about two years since, with the cancer, which had devoured one-third of the nose; repeated application to check its ravages were used, but used without success. While she was in this awful situation, a friend informed her of the cures which had been effected by a physician* from Reading, Pennsylvania, and she immediately applied to him for assistance, who, in about six weeks, completely removed the disease, and restored her to perfect health. During the cure, she was not one hour prevented from pursuing her usual business, nor confined at all to the house. She gives the above statement for the benefit of those who, like herself, are labouring without consolation under the scourge of that formidable enemy to the health and happiness of society.

* Dr. Green, Race-street, No. 149.

I do hereby certify, that the above is a true statement, and request the different printers to give it an insertion.

MARY SCHWYTZER,
North Fourth-street, No. 93.

City of Philadelphia, ss.

On the seventeenth day of March, eighteen hundred and nine, personally came and appeared before me John Barker, mayor of the said city, Mrs. Mary Schwytzer, who, on her solemn oath, declares the above statement of facts by her subscribed, are true.

Witness my hand and seal.

JOHN BARKER, Mayor.

The following, on the same subject, is from the Port Folio of October 24, 1801.

I am in the habit of examining, with very eager attention, that "folio of four pages," vulgarly called a gazette or newspaper. For obvious reasons, I generally prefer an English paper to one of our own journals. When I have the good fortune to obtain, from some city correspondent, a file of the True Briton, or the St. James's Chronicle, I do not examine the dates, or, like Murphy's upholsterer, explore the fate of an Indian prince, or the emperor of Morocco; I look for curious advertisements or whimsical paragraphs, and discover much drollery in that department of a public paper, which is supposed devoted to the dry and the dull.

What, for example, can be more facetious than the various advertisements of perfumers, tailors, razor-makers, and quacks? Here, you are informed that L'Eau de Ninon is a perfectly innocent, speedy, and efficacious purifier of the skin. There, you are taught the virtues of Naples dew, and golden water. Mr. Jones tells you that his rheumatic tincture owes its peculiar merit to a vegetable production: and Henry Cundell eulogizes his improved balsam of honey, as though he were the *queen bee* herself. Then who is there who would not live, when the real restorer of life is to be had, for only 10s. and 6d. per bottle? and who would not dislocate a limb, for the privilege of embrocating it with the veritable oil for fractures? How charmingly Dr. Swainson

theorizes upon the disease, scurvy, when he tells you it would be more accurate to call it " atony, debility, want of force or vigour in the whole frame, induced by *the accidents of promiscuous love*, by the *quackery of domestic medicines*, and by the dreadful custom of apothecaries and surgeons applying mercury, antimony, arsenic, &c." What a display of classical learning is made by James Ryan, surgeon, when he informs the wondering student, that " the herb, coltsfoot, was called tussilago, *by the ancients*." Who would scruple to make the frequent journey to Caledonia, or lie every night between two Scots fiddlers, if he can only carry in his pocket Jackson's original ointment, which cures 15,000 persons annually, and was never known to fail. The cardiac tincture is sovereign for the attenuation of the fluids, and Sharp's concave razors shave exceeding smooth and pleasant. The cream of Euphrasy

" Will give dim eyes to wander leagues around."

And a saving of one guinea in three may be made by wearing Collyer's silk stockings. Universal philanthropic pills with cure *every disorder*, and a bold dentist will forfeit a thousand pounds, if his patients, after using his " curious compound," have the tooth-ach, or the least foulness of breath.

My limits prevent farther description of the mosaic work of English newspapers. The subject will be again resumed, on a future occasion. More of the sublime and beautiful of English advertising eloquence shall be rehearsed, and merry bills be quoted from those empirics, who, in the words of the sneering bishop Hall,

Give a dose for every disease
In prescripts long, and tedious recipes.

REVIEW.

Observations on the Means of preserving the Health of Soldiers and Sailors; and on the Duties of the Medical Department of the Army and Navy: with Remarks on Hospitals and their Internal Arrangement. *By* Edward Cutbush, *M. D. of the Navy of the United States.—Philadelphia, Dobson, 8vo. p.* 336, *price* $2.50.

IN a preface of several pages, the author briefly enumerates the various sources of his information, together with the intention of the present work, and what may be expected from its perusal.

In the commencement of the work itself, the author proposes to make "a selection of such regulations as are inculcated by writers who have actually experienced the vicissitudes incidental to a military or naval life," from whom he reasonably supposes more instruction is to be attained, than from the writings of those who have never witnessed the operations of an army or navy; and proposes, to these, to add such observations as service or reflection have suggested to himself.

He then divides the subject into two heads, viz. 1st, the choice of troops, their clothing, and the preservation of their health; 2dly, the preservation of the health of seamen.

The doctor has given us some important observations relative to the choice of troops, in respect to age, constitution, character, and temperament, &c. which are highly important, and well worth the consideration of those on whom the choice of troops depends. The clothing of the troops is next very judiciously adverted to; together with their garrison and winter quarters.

The discipline and exercise of the troops are next considered, as intimately connected with the preservation of their health. In this section many very judicious and pertinent remarks are made, evincing considerable attention on the part of the author to this point. The same may be said of his observations on the subsistence of troops, as it respects their drinks (in which the articles are properly animadverted on) and their aliments.

The means of correcting the influence of climates are judicious, and deserve the particular attention of those to whom this branch of duty more particularly devolves.

The medical practitioner will find much interesting information in that division of the subject which treats " on the opening of a campaign, and the different movements of an army which may influence the health of soldiers;" and we trust that it will not be lightly passed over by those who have the care of so many valuable lives committed to them.

Of the mode of living and duty in camps, although the subject is not familiar to us from experience, yet it appears highly judicious and worthy of attention.

Our author next proceeds to " the consideration of the health of seamen," in which, from an experience of several years, he is more at home; and which, as founded on his own, and the experience of others, we must consider as highly interesting and worthy of notice.

In his observations on the duty of the surgeon-general and other officers of the medical department, the doctor has evinced much attention; and his remarks will be duly appreciated by those whose situation renders them peculiarly the objects of this division.

In his " remarks on hospitals and their internal arrangements" he gives an interesting account of the origin of hospitals as attached to armies; with a general view of the plan pursued by some of the European nations in their management; and he gives some excellent observations relative to the diet, &c. of these institutions, which are founded on his personal experience of some years, as resident apothecary to the Pennsylvania hospital, which we would suggest, as worthy the attention of the managers of that noble institution. Among other parts deserving of notice, and which we recommend to those who have the necessary power attached to them, is a proposal to remedy the sufferings of sick and wounded, by transportation in common waggons from a camp or field of battle, by means of sacking bottoms peculiarly made, and adapted to be hung by spring hooks to the waggons (see p. 189). The doctor sums up his remarks on this division of his work by enforcing the necessity of strict attention to cleanliness.

The more particular duties of the hospital surgeon and assistants, are next treated of in a concise yet satisfactory manner; and are followed by observations on the naval medical

department, in which the duties of the various officers of the department are enumerated; some remarks are given relative to hospital ships; tables of various kinds, adapted to different purposes, are laid down; and some cursory observations are made on gun-shot wounds, with the necessary preparations previous to an engagement.

Sundry remarks conclude the work, chiefly of importance to those who are entering into the active scenes which the medical department of the army or navy presents to their view; and which might, we apprehend, have been extended with great advantage.

An appendix on the means of dis-infecting the air is given in a translation from the Italian, which is followed by an analysis of mineral waters from Aikin's Dictionary of Chemistry and Mineralogy; and "directions to nurses and orderly men for the preparation of the diet, &c. for the sick." To these are added "gleanings for the use of sea officers and men," containing the best modes of preserving a variety of articles for use, and for making sundry articles of diet or drink.

The author has added the regulations established in the British naval service, from Turnbull's Naval Surgeon; and Dr. Rush's directions for preserving the health of Soldiers.

We have thus given a cursory view of a work, which, independently of its own intrinsic merit, certainly deserves every encouragement, as being the first of the kind published in the United States by a native American; and rendered more valuable as being founded on the experience of several years service in the navy of the United States. We might have enlarged this review by copious extracts from the work, which,

whilst they proved the industry of the author, would have tended to the reputation of the Medical Museum; but we trust that what has been said will be sufficient to excite those gentlemen for whom the work was principally written to acquaint themselves more fully with its merits, than could be acquired by those partial and insulated extracts, which could be introduced from it into this work.

An Inquiry into the Use of the Omentum: being an Inaugural Dissertation for the degree of doctor of medicine; submitted to the examination of the Rev. John M'Dowel, LL. D. provost, the trustees and medical professors of the University of Pennsylvania, on the 19th day of April, 1809. *By* James Rush, *of Philadelphia.—Philadelphia, T. & G. Palmer,* 1809.

FROM among the few theses which have been published by the graduates in medicine in the University of Pennsylvania, we shall select some extracts from the thesis of Dr. James Rush, in which he has suggested a new theory of the use of the omentum.

"The uses ascribed to the omentum (says our author) have been many and various; some of those generally received shall be the objects of consideration.

"I. Its office has been supposed to prevent the injuries from the friction of the intestines upon each other, by furnishing an oleaginous fluid to lubricate them.

"It has long been the practice of physiologists, to measure he intentions of nature by their own ingenuity. Hence the

the evil arising from a defect of warmth, by placing these viscera near the greatest source of heat. Secondly, if it were true, the want of such a provision would be felt elsewhere. Why has not the brain its hood, or why is the thorax without its breast-plate?

"This opinion is deduced from the fact, that very fat people feel the cold less sensibly than those who are lean. But this is to be ascribed to the effect it has upon the nerves. Richerand, in speaking of the uses of the fat, says, 'and finally, it covers and surrounds the extremities of the nerves, diminishing their susceptibility, which is always in *an inverse proportion to corpulency*.' Again, 'In fact, persons subject to nervous affections, constantly join an *extreme leanness* to an *excessive sensibility**.'

"Other opinions of the uses of this organ have been proposed. They will be omitted to give place to one, to the support of which the following pages shall be devoted.

"I shall endeavour to prove the omentum to be *an organ for the secretion of fat, furnished with vesiculæ for its reception, in order to supply the body with nourishment, when the resources by the stomach fail.*

"The arguments for the support of this proposition will be be deferred, till the consideration of some circumstances which are connected with this view of the subject.

"That fat nourishes the body in certain states is no new idea: the phenomena of its existence were too obvious not to

* Physiology. Article lxxvi.

lead to that conclusion. As an old doctrine, it has little meaning. Blood is the only medium of nourishment with which we are acquainted; but the fat has not yet become blood. How is this effected? It may be said that it is produced by the lymphatics and their glandular system. This may be answered, by observing, First, whatever change is the effect of their action, it is certain they do not completely convert it into blood; nay, they do not even form a chylous substance, but a more limpid fluid. Secondly, fat has been found in the branches of the vena portarum. A sufficient proof that it has passed, with little or no alteration, the action of the lymphatics: it being immaterial whether it has gotten into the veins by a set of partial vessels, or has passed the circle of the general absorbent system. The change then must be made after it enters the circulation, and nowhere is there a cause adequate to that, except in the lungs or the liver. It cannot be in the lungs, for chyle has been found in the blood after it has passed through them.

" It remains then for the liver to perform the office in question, and this I shall now consider more in detail.

" ' The design of the liver,' says the author, in the essay referred to, ' I believe to be, to receive the blood from every part of the body, in order to subject that part of it which has not been completely animalized, or divested of its chylous properties, to a secretory process, and afterwards to pour the product of this secretion, mixed with the liquor of the pancreas, into the duodenum, to be absorbed or otherwise taken up by the lacteals, and conveyed with the chyle from the stomach into the blood-vessels, in order to be completely converted into red blood, for the purpose of serving the various and important uses for which that fluid is intended in the human body.' It would consume too much time to give, at large, the facts and reasonings used by

the author to support this proposition. I shall give an abstract of them. The same power that *perfects* the chyle, converts the fat to a like matter; and as this is one of the ideas embraced by this essay, its proof may be required.

"The arguments in support of this doctrine are,"—Here the doctor mentions, in a summary way, the arguments in favour of the liver perfecting the chyle, published in the Medical Museum, Vol. III, by his father, Dr. Benjamin Rush. He then proceeds:

"To the above arguments in support of this opinion of the function of the liver, I shall add the following observations. Doctor Pemberton, in his treatise upon the diseases of the viscera*, has taken a view of the glands of the body, as divided into those that secrete a fluid from the blood for the use of the system, and those that secrete a fluid to be discharged from it. The former he has called glands of supply; the latter, glands of waste. He has satisfactorily shewn, that derangements of the glands of waste are not attended by any alteration in the bulk of the body: whereas disease in the glands of supply, in almost every case, produces emaciation. The liver is an organ, the diseases and disorders of which cause a wasting of the flesh. This gives it a place among the glands of supply. I would however infer that it serves this purpose, more than is generally allowed; for if so great a quantity of bile as 24 ounces, which is secreted in 24 hours, be not excrementitious, how considerable must its effect be in nourishing the body! It is known that gall-stones obstructing the biliary ducts produce emaciation. This has been ascribed to the effect of the irritation of pain

* See 'A Practical Treatise on Various Diseases of the Abdominal Viscera,' by C. R. Pemberton.

upon the system. I would rather suppose it to be owing to the obstruction to the flow of bile, when the stone is in the ductus communis; and when it is in the cystic duct, to the irritation, by continuous sympathy, causing a vitiated secretion of bile.

"With these views of the liver as established premises, I shall proceed to exhibit the proofs of the proposition laid down, on the subject of the intention of the omentum.

"This viscus seems not to be one of those whose use is inscribed upon it so legibly, as not to need the efforts of reason to decypher it. The appearance it exhibits to the eye, is not sufficient to manifest its operations. It is of such inconsiderable importance to the animal system, as not to give by its own derangements any very sensible alteration to the functions of the body, or at any rate it has its office vicariously supplied. From this view we may see why the separation of parts of it, its adhesions, and every other preternatural state of it, have so little effect upon the body. Hence too the difficulty and inefficacy of any experiments, to which it could be subjected. There exist, however, facts enough connected with its ordinary phenomena, as exhibited after disease, to afford just conclusions of its use. To this add its fitness for the office here ascribed to it. For though the sufficiency of a cause be not an undeniable argument for its agency, yet it is essential to proof.

"It has been said before, that *the omentum is an organ for the secretion of fat, furnished with cells for its reception.* This is true, whatever be the intention of the fat when secreted. It is true, because it is seen. I know of no other argument for its proof. Beside the evidence of our senses, proof requires the mediation of axioms. There is no assertion more self-evi-

dent. I might indeed vary its form, but, like the revolutions of a sphere, it would not bring a greater compass into view*.

"The second part of the proposition to be considered is, that *the omentum is intended for the purpose of supplying the body with nourishment when the resources by the stomach fail.* My belief in this arises from the following facts:

"1st. *From the situation of the omentum*, being in that part of the body where it can afford none of those offices, which the fat in other parts of the system supplies. These are, giving shape to the body, lubricating for the advantages of motion, filling up unavoidable cavities, and serving as the envelope of some viscus or organ. Here is no rugged angle of feature to be smoothed. Here is no eye whose delicateness the contact of bone would injure.

"2d. *From its little sensibility*, known from the removal of parts of it, and from its circumstances in hernia and wounds. From this I would infer an aptitude for its intention to admit of variation in its size by its distention with fat: a property which, had it not possessed, would have subjected it to the inconveniences of pain.

"3d. From its presence in so many animals, taken in conjunction with

"4th. Its absence in others. It would be tedious to enumerate the different animals in which this viscus is found, as well as those in whom it is wanting. The exceptions to it, give the

"* Perhaps we might urge its great vascularity, and its diseases, hydatids and schirrus, in favour of its being a secretory organ.

best idea of its use. For here, as in the forms of mathematical evidence, the substitution is more easily understood. When the omentum is wanting, its place is supplied by a substance which allows scarcely a doubt of its use, and to ascribe to that substance the generally received uses of the omentum, would be absurd. There is only one office, which these adipose substances appear capable of affording, and that is, the nourishment of the body by their fat. This, indeed, is universally allowed. Haller, speaking of the use of the omentum, says: 'Qua tamen animalia omento destituunter, iis adipis massa pro omento est; avibus nempe aquaticis aliisque et piscibus*.' But without the argument arising from this circumstance, even were this substitute wanting, still its absence would not be an unanswerable objection. The qualities that animals possess are variously, but not partially bestowed. Hence the want of one is supplied by the presence of another similar to it, or equally important. If the omentum should be wanting in some animals, this would not prove that they were denied the advantages that others received from it, or that it was useless in those that had it. It would be explained by these three circumstances: first, that the animals had other peculiarities of structure, as important; secondly, that fat was to them not so necessary; or, thirdly, that the existence of this fat would be inconsistent with some other property more advantageous to the animal.

" 5th. I infer the use I have ascribed to this viscus from the state of the omentum in *hybernating animals*. Besides the quantity of fat throughout the cellular membrane generally, and an omentum much distended with it, these animals have two lateral appendices, like the omentum in their structure and

" * Elementa Phys. vol. vi, p. 381.

intention. Haller speaks of this appearance in some of these animals, ' ut sint tria quasi omenta*.' Now, what is the occasion of this great provision? The only circumstance that distinguishes these animals from others, is their remaining for a certain time, without the resources of the stomach for food. Corresponding to this is the state of the omentum. There is no other peculiarity of these animals that requires this difference. There is not more need for lubrication, not more oil required for the bile, nor is it necessary for any other of the imaginary uses ever ascribed to the omentum.

" The views arising from this class of animals are so interesting to the subject, that they will be considered more fully.

" Cuvier, in his observations on this subject, mentions a fact, which, by indicating a use for the omentum, seems to be an objection to that one I wish to establish. ' Le grand *épiploon*, suspendu comme un rideau entre les parois musculeuses du bas-ventre, et les circonvolutions des intestins, modère sans doute un peu les froissemens que ceux-ci pourroient éprouver des premières, et sert particulièrement à retenir dans les intestins la chaleur qui tend continuellement à s'échapper vers la circonference. L'histoire des membranes graisseuses dans les animaux qui hibernent, va nous confirmer dans cette dernière opinion. Lorsque l'estomac est plein d'alimens, cet épiploon est raccourci et relevé sur sa face antérieure, de manière à la recouvrir plus complètement qu'avant. Il rend alors plus particulièrement à ce viscère le service que nous venons de lui attribuer à l'égard des intestins. En même temps le sang passant moins facilement dans ces vaisseaux, coule plus abandomment dans ceux de l'estomac, dont les premiers ne sont

" * Haller's Physiology, vol. vi, p. 381.

que des divisions, et y sépare une plus grande abondance des sucs gastriques*.'

" What seems to be of importance here is, that the omentum is found investing the stomach, whilst it is employed in digestion. A little inquiry will give this an explanation. Observations on animals with the stomach thus enveloped, have been made when the animal was in its living state, well supplied with aliment from the food it was taking, and before the store of fat was laid up for its winter support. Now, that a membrane, thin and vacillating, should, by the constant peristaltic motion of the intestines, be contorted from its natural dependent situation, is not extraordinary, but purely accidental and natural. Before the action of the stomach has ceased to be required, the wants of the animal have called for an accumulation of fat. When the cells of the omentum have become distended, the most economical situation for this membrane is extended and flat. Hence it leaves the stomach, and is spread upon the intestines. But why, according to Cuvier's idea, does this change take place? The bowels are not more active than the stomach; nor is there any other reason why they require more warmth. The last part of this quotation supposes that another advantage is given to the stomach, by this folding of the omentum causing a greater secretion of gastric liquor. This is not the only viscus to which this office of supplying blood to the stomach has been ascribed. The spleen is even yet supposed to be for that purpose. They are both equally untrue. The greater flux *alone* of blood in any viscus, never tends to increase its secretions. This is proved by the phenomena of the circulation and of fevers. Exercise is not, when violent, immediately followed by

" * Leçon xxii, p. 86.

an increase of all the secretions; nor are inflammations of the liver and kidneys always attended by a preternatural flow of bile or urine. An unusual quantity of blood, in any part, produces disease, or is disease itself. It would be well, if, by secretion, an organ could thus easily rid itself of its irritating cause. Celerity or energy of chemical attractions alone can give rapidity to secretion.

"Some of the species of the hybernating animals are destitute of the omentum. The account given of such animals will sufficiently obviate any objection that might arise from it. Cuvier, in speaking of the hybernating class, says, "Les oiseaux des mœurs analogues, tels que l'hirondelle de marais, plusieurs reptiles que hibernent de même sont depourvus aussi de ces membranes graisseuses; il est vrai que leur *peritoine* se charge pendant l'hiver *d'une graisse abondante*."

"6th. From the defect of fat in the omentum of the fœtus. 'Tenue in fetu, in adulto homine varie obesum*.' This is a fact of great importance. In the fœtal state the supply of nourishment is nearly uniform. The minute arterial connection of the placenta with the uterus, prevents the effects of a hurried or disordered circulation upon the fœtus. Hence there is but little alteration of the volume of blood sent to it, under every irregularity of the mother. With such a constant and unvaried supply, the office of the omentum in the fœtus would have been unnecessary. Soon after birth the fat is deposited, for then the want of it begins to be felt.

"7th. I infer it, from its distention with fat more particularly than any part of the body, in those disposed to obesity.

"* Elementa Phys. vol. vi, page 367.

Whatever purpose the fat serves, that must be more eminently in view in the omentum, as it contains the greatest quantity. It has been shown that its offices in other parts of the body have no concern here. Its more obvious and important intention of serving as nourishment, alone remains of its uses.

" 8th. From its state when divested of fat; being reduced to a slender contracted membrane, and so much diminished, as to be apparently not fitted for any purpose in the animal economy. The histories of dissections contain many accounts of a partial or total loss of this viscus. Of these I shall mention one, as quoted by Portal, in the case of a patient who had died of pulmonary consumption. ' The other viscera were flaccid, pale, and void of blood. *The omentum was destroyed*, and the body reduced to such a degree of emaciation, as to resemble a very skeleton*.' Here it was not destroyed, as parts of the body often are, by local disease, nor was it absorbed, as parts are when removed from their natural situation. But in a phthisical subject, where the cause of the death was seated in the lungs, its disappearance could have arisen only from the great demand for nourishment, which attends this lingering disease. Not only in this case was the fat absorbed, but its whole substance, as if the membranes, when they had lost their contents, being useless, were themselves taken for food. Perhaps the ludicrous observation made by Mr. Bell, of the impossibility of lymphatics absorbing themselves, might be urged here. I cannot, however, see any more error in it, than in the intussusceptio and sphacelation of an intestine. But, even admitting the impossibility of this, certainly one lymphatic may absorb another. It will be no objection to this to say, that, whilst the

" * Observations sur la Nature et sur le Traitement de la Phthise Pulmonaire, par Antoine Portal. p. 227.

vessel is in a living state, it cannot be subject to the laws of inorganized matter. In reality I know no difference between the laws of living and of lifeless matter; but, according to either idea, the invisible particles, which are taken up by the absorbents, have not the property which common observation makes the characteristic of life, that is, organization or vascularity.

" 9th. From the structure of the omentum. It is vascular for the secretion, and cellular for the reception of fat, and is provided with lymphatics for its removal.

" 10th. Lastly, I infer that the intention of the omentum is to afford nourishment to the body, from the connection of certain states of this viscus with the diseases of the liver. The fat of the body, without a liver to change it, would have been useless as to its most important property. The diseases of the latter might be supposed to have an influence upon the former, and accordingly a diseased liver has been found, in many instances, to be accompanied by an unnatural state of the omentum. In some cases where, it is true, this viscus should have been deprived of fat, it has been found preternaturally distended with it. But, fortunately for my argument, the liver has, in these cases, been also diseased. I admit, it may be shown from the accounts of dissections, that the liver has been disordered, and yet the fat of the omentum properly absorbed; nay, the membranes which inclose it have been destroyed. This I shall answer by observing, first, that a diseased appearance in the substance of the liver, does not prove a derangement of its secreting organs; and, secondly, admitting this, much more knowledge on the subject is required to determine that these alterations did not take place before the liver became thus diseased. It it is sufficient, then, if I can give one or two instances of this

correspondence in disease, in the two viscera: the exceptions are explained by the two foregoing observations.

" Lieutaud mentions some cases of this kind. I shall relate one of them. In his observation 227, he says, ' Quidam consistensibus ætatis obesus, et jam dudum *asthmaticus;* tandem in ischuriam lethalem incidit. Secto cadavere, deprehenditur omentem, ob majorem adipis copiam; et pondo trigenti librarum. *Hepar erat mole maximum.*'

" In Heister's observations is related the case of a patient who died of extreme emaciation generally, but in whom the omentum was found ' very fat.' He had before death been long troubled with a diarrhœa, which indeed indicated a disease of the liver, and the dissection proved that viscus to be in a morbid state. But what was of much more importance, as it proved the *secretion* of that organ to be altered, was that the patient, during his illness, was troubled with eructations of matter resembling ' bile in being acrid, but destitute of its bitter or acid taste.'

" Here was a case, where, from the wasting diarrhœa that attended, no fat would have been expected to be found in the body; and yet here is an omentum loaded with it. The liver was diseased, and incapable of converting the fat to nourishment. In this state, then, there was no need of absorption, and consequently we find none. It may be said, that, as it had disappeared from the other parts of the body, may not some other cause than the disease of the liver have been the reason why it also was not taken up? This I would answer by observing, first, that the fat of the other parts of the body being less in quantity than in the omentum, would be much sooner absorbed, and this may have taken place before the liver was so far deranged as to be incapable of the office of chylification; or, secondly, if it shows the agency of any other cause, it is that the lymphatics of the omentum and the other parts of the

body have different degrees of power; a fact that would turn to my advantage; for, if the fat in the two situations have different intentions, we should expect to find some of their other circumstances different.

"Mr. Proust, in his Dissections, relates a case that helps to illustrate this question. A patient, who had been much troubled with bilious complaints, was seized with indigestion and vomiting; and these were succeeded by a diarrhœa, of which, after three weeks' continuance, he died. On opening the body, much fat was found everywhere, and the omentum 'entirely occupied by it.' *The liver was of a remarkable size.* Now, if any thing could have given rise to an absorption, it would have been the wasting of a diarrhœa, and the want of nourishment which a diseased stomach must have occasioned. Yet here is a body '*embonpoint assez*,' to use his own words.

"The pulmonary consumption, more than any other disease, is attended by an emaciation, arising, most probably, from the chronic nature of that complaint. It is certain that the proper and natural supply of materials for the action of any viscus are necessary for its health. Perhaps, then, the diseases of the liver that attend upon consumption, arise from its want of the proper substance for its action. Perhaps, too, the want of that natural supply gives rise to a vitiated secretion, which may be the cause of the wasting diarrhœa that commonly terminates that disease.

"Concerning the disappearance of fat by disease, it deserves to be remarked, that by fasting the action of the lymphatics is increased. If it were not so, fat could not be removed. Now, we know that the want of food by the stomach, almost always causes an absorption of fat*.

"* Perhaps, under this remark, it might not be amiss to notice the practical benefit to be derived from this disposition of the lymphatics to take on a preternatural action during fasting. It teaches us to endeavour, by abstinence, to pro-

" I have thus gone through the several heads of the reasons for my belief on this subject. If any one or two of them appear not conclusive, or even objectionable, let it be remembered that the evidence does not rest upon them alone. If the whole, taken together, should amount to proof, it is sufficient.

" There remain yet some facts, connected with the subject, which, not being referrible to any of the foregoing heads, may properly be considered here.

" It is said that the omentum of herbivorous animals is in general more fat than that of carnivorous. It also said that the same peculiarity distinguishes those whose motions are sluggish, from those whose habits of life are more active. One answer will be sufficient for both these facts. Nature, in the formation of animal bodies, has never made qualities to oppose each other. Fat may have been very necessary for the nourishment of those animals whose wants required physical alertness; yet the existence of fat would have been inconsistent with this last quality. A more important function would hardly have been made subservient to one less necessary. The fatness of herbivorous animals is owing to the abundance of their food, not requiring much exertion to obtain it. The herbivorous are fat, because they require no activity. Carnivorous are lean, because fat would have been an incumbrance.

" Another fact to be referred to this division of the subject, is the fat found in the abdomen of horses. ' Equis a concusso per magnos motus omento adipem non in venas redire, sed in abdominis caveam quasi fusum elabi, et intestinis circumfundi.'

" It has been said before, that the omentum is a secretory

mote the absorption of collections of water in dropsy. That it should not oftener succeed, is owing to the interference of some cause that continues the disease. If the removal of water were the only object to the cure of dropsy, I have no doubt that abstinence would, in almost every case, be effectual. There are many instances on record of the advantage of this remedy.

organ. In this case, the fat is secreted in a preternatural quantity, to such a degree, indeed, that the cells of the membrane cannot contain it. Hence they are ruptured, and it is poured into the abdomen. The idea, that there is a greater quantity of fat, is corroborated by the circumstance of its being altered in quality. It is found 'quasi fusum,' which plainly shows its secretion to be changed: fat, in its natural state, never has that form. Why violent exercise should give rise to this preternatural secretion, I cannot pretend to say.

"Some notice has before been taken of the unequal quantities of fat in different parts of the body. Collections of it are often found about the heart, and in the extremities, whilst other parts are much emaciated. As the removal of the fat is performed by the absorbents, it must be influenced by any irregularities that may occur in that system. In addition, then, to the reasons that have already been given for the partial remains of fat, I shall observe that the lymphatic, like every other system in the body, may be partially diseased. Hence a preternatural activity of one part will cause a speedy removal, whilst a torpor in another will prevent any absorption of the fat.

"Another fact, which goes not so much to support the main object of this essay, as to prove the nutrient property of the fat, and its use in the body, is the circumstances of those persons who are under the effects of famine. Dumas, speaking of long-continued abstinence, says, 'It is worthy of remark, that the examples of this kind have principally women for their object.' Now, it is a fact confirmed by anatomists, that fat is proportionally more abundant in children and *females*.

"I have thus, in a cursory manner, considered some of the leading points of this subject. It has been more my wish to establish a new opinion, than to enter minutely into circumstances already ascertained; although, for the purpose of

the former, much of the latter has been necessary. Many facts and opinions have been omitted, which time would not allow, and which the occasion of my writing forbids me to mention. To have considered the subject in all its connections would have been to extend it to too much length. The unity of nature has forbidden a separation of different sciences; much less can a line be drawn through those subdivisions which have been designated by the names of particular sciences.

"Thus far the subject has been considered in relation to theory. The speculative part of every science is its shadow only. We meet it first, because the light is placed behind it. I shall take leave of it by considering a few of the practical applications of the subject.

"The first inference that presents itself, from the doctrine I have delivered, is an argument for copious and protracted blood-letting. 'In an adult man,' says Richerand, 'of moderate rotundity, the adeps constitutes a twentieth part of the weight of the body.' This, upon a moderate computation, would give seven pounds of fat for the supply of the body; a quantity sufficient for its nourishment a considerable time. That it should not sustain it as long as the same quantity of aliment taken by the stomach, should not surprise us, for some of the effects of famine are to be considered as arising, not from the want of additions to the body, but from the derangements which the system suffers through the medium of the stomach. The proper state of this viscus is necessary to the health of the whole body. When the absence of its natural secretion causes disease there, no wonder that the evil of famine is doubled. We should in vain attempt to subdue a pulse by blood-letting, if, at the same time, we should give rich soups to our patients, and yet even a more nutritious substance than this the body is supplied with by its fat. Depletion,

when required, may be continued till that quantity appears to be exhausted, for not till then will it be effectual. Whence, if not from the fat, can be derived the full pulse which attends a chronic fever, when blood has been copiously drawn, and the stomach has long rejected food? Let not, then, the fear of weakness from venesection or abstinence forbid the use of the lancet.

" Secondly, From the preceding facts and reasonings, can be drawn an answer to the common objections to fasting in the cure of inflammatory fevers, or other diseases requiring depletion. I have already spoken of an *advantage* to be derived from the use of this remedy in dropsy. The *evils* that are apprehended from this mode of treatment, are all prevented by the slow, yet equable supply of nourishment which the fat supplies to the body.

" A third observation, more particularly applicable to the function of the liver, is the case of a diseased stomach, when it cannot perform its office in chylopoiesis. That wisdom which made the stomach, foresaw its derangement; and it completed the fabric of the body, by giving fat to supply the place of food, and a liver for its conversion into nourishment.

" Lastly, let us subscribe to the doctrine of final causes. Aliments, according to their nutrient power, have been divided into grades. Sugar, as containing the most nourishment under the least bulk, ranks first in this order. Oil is next to this; and fat, as uniting other properties for the advantage of the body, was the most suitable substance for its purpose. That obesity which to our eyes may sometimes appear disgusting, is perhaps not a partial evil, but a general benefit. The omentum, which has been considered as useless, or supposed to perform very subordinate functions in the system, appears, from the foregoing facts and reasonings, to be a store of aliment for disease and famine."

A Description of the Apparatus by which the Experiment on the Decomposition of Potash by Iron, has been repeated at the Royal Institution, in London.

The apparatus consists of a common gun-barrel curved with one large and one small curvature, and passed through a portable furnace, to which the pipe of a pair of bellows is admitted through an aperture at its side. The curved part of the pipe hangs downwards; to one of its ends an iron tube of about the capacity of two inches, having a ground stopper, is adapted, for containing the potash, which flows out of it, through a very small hole at the lower end. To the other extremity of the bent barrel, a tube of safety is fitted, containing a little mercury or naptha, to prevent communication with the outer air.

In the experiment, iron turnings, put into the barrel so as to fill a part of the lower portion of its curve, are heated to whiteness; the potash is then slowly fused, and flows on the turnings, where it is decomposed; and its base is found condensed near the other extremity of the barrel.

The proportions from which the best results have been obtained, are about $2\frac{1}{2}$ parts of iron turnings to $1\frac{3}{4}$ parts of potash.

In order to the complete success of the experiment, the whole apparatus should be perfectly dry, clean, and impervious to air; the turnings free from oxidation, and the potash very dry; which last is effected by heating nearly to redness. Pure or crystallized potash, in its usual state of dryness, contains water enough to occasion the failure of the experiment. The tube containing the potash should be surrounded with ice, until the iron turnings are white hot; and that part of the barrel where the metal of the potash sublimes, should also be kept cool during the whole process. The barrel should be carefully luted; and it is proper to examine the lute after it has been exposed to a red heat, in order to repair any cracks which the fire may have occasioned.

At the commencement of the decomposition, hydrogen gas is evolved, and continues to come over during the whole of the process. Towards the end of the experiment, a very intense heat should be continued for some minutes, to drive off the last portions of the metal of potash, which adhere to the iron turnings with great obstinacy.

London Athenæum.

Literary Intelligence.

Messrs. Collins and Perkins, of New York, have issued proposals to publish by subscription, " The Anatomy of the Human Body, illustrated by 125 engravings. By John and Charles Bell, surgeons in Edinburgh."

This highly useful and important work is to be printed in 2 vols. 8vo. on a fine vellum paper, from the 4th London edition. The engravings, on the printed pages, are executed on wood, by Dr. Anderson. The price to subscribers is $4 50 per volume, in boards; $5 bound and lettered.

A selection of reviews from English publications accompanies the prospectus, which cannot fail of evincing the high degree of estimation in which this interesting work is held; and, as it is given at one-third the price of the English edition, must insure the sanction of the physicians of America, as a work in the highest degree worthy of a place in every medical library.

Messrs. Hopkins and Earle have in the press, " A Treatise on the Membranes," by Xav. Bichat, member of the societies of medicine, medical and phylomatic, of Paris, and those of Brussels and Lyons. Translated from the French, by George Williamson, member of the medical and surgical faculty of Maryland.

As the only express treatise upon this branch of anatomical knowledge, and by an author so well known to the world as Bichat, we cannot doubt that it will be highly acceptable to the physicians of the United States.

Obituary.

On the 4th of June, in the 39th year of his age, James Woodhouse, M. D. professor of chemistry in the University of Pennsylvania.

Lately, in Great Britain, the celebrated Dr. Beddoes. The life of this gentleman is preparing for the public, by his friend Dr. Edmond Stock, who graduated in this city some years ago.

Dr. Hawes, well known for his active and indefatigable exertions as secretary of the Humane Society of London.